CLAIMS:

1. An examination apparatus for examining an object of interest, the examination apparatus comprising: a source of radiation for generating a first radiation penetrating the object of interest; a scatter radiation detector for detecting a second radiation of the first radiation; wherein the second radiation is scatter radiation which is scattered from the object of interest; wherein the scatter radiation detector is stationary during scanning of the object of interest; and wherein the source of radiation is displaceable during the scanning of the object of interest.

2. The examination apparatus of claim 1, wherein the source of radiation is displaceable along at least a first portion of a first circular path.

3. The examination apparatus of claim 2, wherein a location of a region within the object of interest from which scatter originates is coded on a coordinate of the scatter radiation detector.

4. The examination apparatus of claim 3, wherein the scatter radiation detector is stationary arranged centrally to a rotational axis during scanning of the object of interest and extends along a portion of a second circular path around the rotational axis; wherein the scatter radiation detector comprises at least one detector element; wherein the at least one detector element is arranged along the portion of the second circular path; wherein the portion of the second circular path corresponds to the first portion of the first circular path; wherein the at least one detector element is an energy-resolving detector element; and wherein the coordinate of the scatter radiation detector on which a height of the region within the object of interest from which scatter originates is coded is a radial coordinate.

5. The examination apparatus of claim 2, further comprising: a primary collimator for collimating the first radiation such that the first radiation has a wedge shape and converges at a stationary point of the transmission detector; a secondary collimator for absorbing radiation which is propagating in a direction different from the direction defined by a cone semi angle and a scatter angle; and a transmission detector for receiving a third radiation attenuated by the object of interest; wherein the transmission detector is stationary during scanning of the object of interest.

6. The examination apparatus of claim 5, wherein the secondary collimator comprises a plurality of channels formed by a radiation absorbing material; and wherein each of the channels of the plurality of channels is oriented with respect to the direction defined by the cone semi angle and the scatter angle.

7. The examination apparatus of claim 2, wherein the rotational axis is defined by a center of the first circular path and a center of the second circular path; wherein the rotational axis is perpendicular to a first area encircled by the first circular path and perpendicular to a second area encircled by the second circular path; wherein the transmission detector is stationary arranged on the rotational axis; wherein the stationary point of the transmission detector at which the first radiation converges is located in a detection center of the transmission detector; and wherein the third radiation is converging at the stationary point while the source of radiation is moving along a portion of the first circular path.

8. The examination apparatus of claim 1, wherein the examination apparatus is transportable and adapted for baggage inspection; and wherein the source of radiation is a polychromatic x-ray source.

9. The examination apparatus of claim 1, wherein the source of radiation comprises a laser pointer; and wherein a laser beam of the laser pointer, which is

aligned with the third radiation, is aimed on the stationary point for facilitating alignment of the examination apparatus.

10. The examination apparatus of claim 1, further comprising: a calculation unit for reconstructing an image from readouts of the transmission detector and the scatter radiation detector; wherein the examination apparatus is adapted for the detection of explosives in the object of interest by using readouts from the scatter radiation detector.

11. A method of examining an object of interest with an examination apparatus, the method comprising the steps of: energizing a source of radiation such that the source of radiation generates a first radiation adapted to penetrate the object of interest; performing an energy measurement of a second radiation scattered from the object of interest by means of a scatter radiation detector with energy resolving detector elements; wherein the scatter radiation detector is stationary during the scanning of the object of interest; displacing the source of radiation during a scanning of the object of interest.

12. The method of claim 11, wherein the source of radiation is displaced along at least a first portion of a first circular path.

13. The method of claim 11, wherein a location of a region within the object of interest from which scatter originates is coded on a coordinate of the scatter radiation detector.

14. The method of claim 11, wherein a rotational axis is defined by a center of the first circular path and a center of the second circular path; wherein the rotational axis is perpendicular to a first area encircled by the first circular path and to a second area encircled by the second circular path; wherein the scatter radiation detector is arranged at least at a second portion of the second circular path.

15. The method of claim 11, further comprising the steps of: moving an apparatus comprising the source of radiation and the scatter radiation detector to a location of the object of interest; and examining the object of interest.

16. The method of claim 11, further comprising the steps of: activating a laser pointer; wherein a laser beam of the laser pointer is aligned with the third radiation; aiming at the scatter radiation detector for aligning scanning.

17. Computer program product stored on a computer readable medium, wherein, when the computer program product is executed on an examination apparatus for examination of an object of interest, the examination apparatus performs the following operation: energizing a source of radiation such that the source of radiation generates a first radiation adapted to penetrate the object of interest; displacing the source of radiation during a scanning of the object of interest; performing an energy measurement of a second radiation scattered from the object of interest by means of a scatter radiation detector; wherein the scatter radiation detector is stationary during the scanning of the object of interest.